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China: a Young Man's first Encounter

by WALTER GUINNESS, THE LATE LORD MOYNE

Lord Moyne's assassination in 1944, when he held the crucial post of Minister Resident in the Middle East, brought to an end a career of unobtrusive public service. Evidence of the quality of his active and observant mind is found in his travel-books Walkabout and Atlantic Circle, and in the following extracts from letters written to his Mother in 1902, at the age of twenty-two

OCTOBER 8, 1902

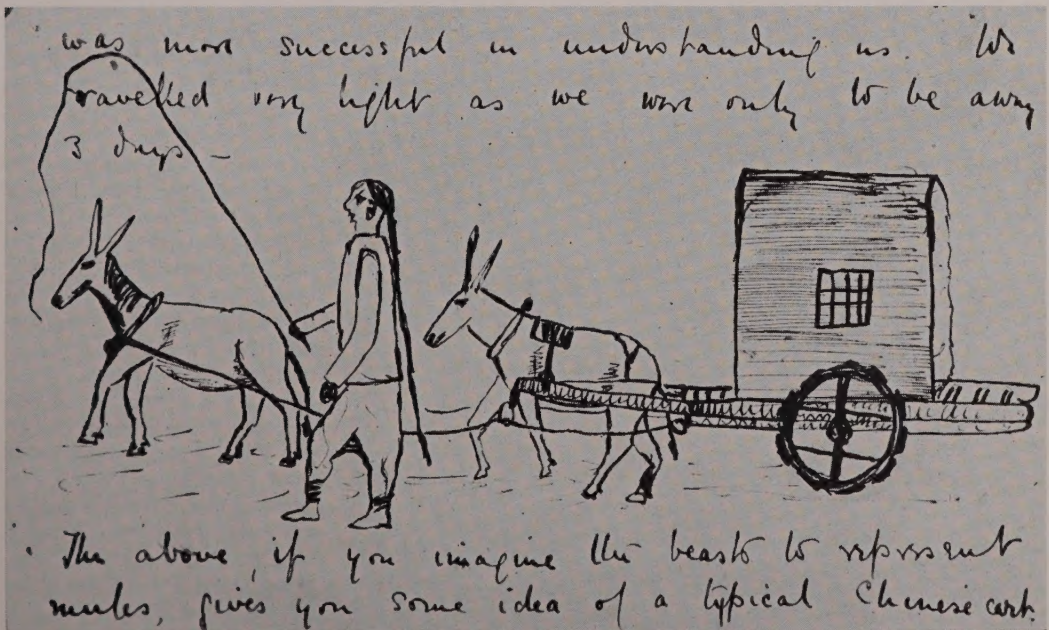
We got back from our expedition to the Great Wall and Ming Tombs last night, so while it is fresh in my memory I'll tell you about it. Perhaps you would keep this letter, as I am not going to put it in my diary.

We left the hotel early on the morning of the 5th, as we had a hundred Li ($33\frac{1}{2}$ miles) to do before night. Our cavalcade consisted of a broken-down pony with a sore back and girth-gall ridden by Ralph, and two good mules carrying a *Mafoo* or man to look after the beasts, and myself. Our luggage and food were in a Chinese cart which also contained our guide, a fat old Chinaman who talked such atrocious pidgin-English that we rarely knew what he meant although he was more successful in understanding us. We

travelled very light as we were only to be away 3 days.

The above, if you imagine the beasts to represent mules, gives you some idea of a typical Chinese cart. There are no springs, and no seat inside. The passenger sits on his luggage. The leader is really further ahead than I have shown, and it is surprising that the long ropes, by which he is fastened to the cart, do not more often get between his legs.

It is impossible, by any description, to give an idea of the fascination of Pekin. Everything is different to one's ingrained ideas. One has seen quaint sights in Egypt, but the mind of an African must be more like ours than the Chinese. One has a feeling of uncanniness, when one sees how very different everything is. From the great pagodas down to the simplest customs which one sees in the



streets, everything is ingenious but always original to Western eyes. One might be on another planet, moving among the civilization of creatures whose ways of thought are governed by laws different to our own. The expression on a Chinese face is a new language. When one watches a dog or a horse one seems to understand its emotions, by their external signs, better than one can the thoughts of a Chinaman by the expression of his face. And so it comes that one feels the impossibility of describing one's impressions of China. To write of individual points of interest cannot give any impression of a picture whose perspective one does not understand, but whose every shade attracts and interests one.

After going a few hundred yards down the so-called Boulevard des Italiens, a broad piece of dusty ground with a few trees, and heaps of rubble scattered untidily about, we turn up to the right, towards the forbidden city. Tho' it is only about 7 a.m. the streets are crowded. We pass a string of two-humped camels, very ugly beasts whose cynical expression is increased by a piece of wood passed through the lips from side to side for the attachment of a string, and which contracts the nostrils. The dust is about 3 inches deep, but is laid by men who scatter water with wicker ladles attached to the end of poles. The prevailing colour of the people's clothes is blue, but the richer classes wear grey, red, yellow and green silks. The shoes are of felt; baggy trousers are fastened round the ankle by bandages, and loose garments,

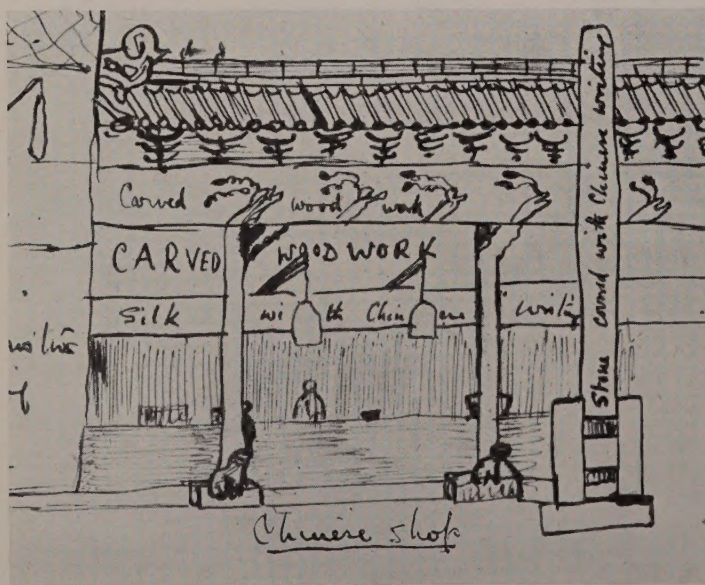
strung down the side, cover down to the waist, or knee, or both according to the class and occupation of the wearer. When working the pigtail is loosely coiled round the head or stowed away under a handkerchief. Occasionally one would pass a bonze or Buddhist priest dressed in a dirty orange robe with a red girdle.

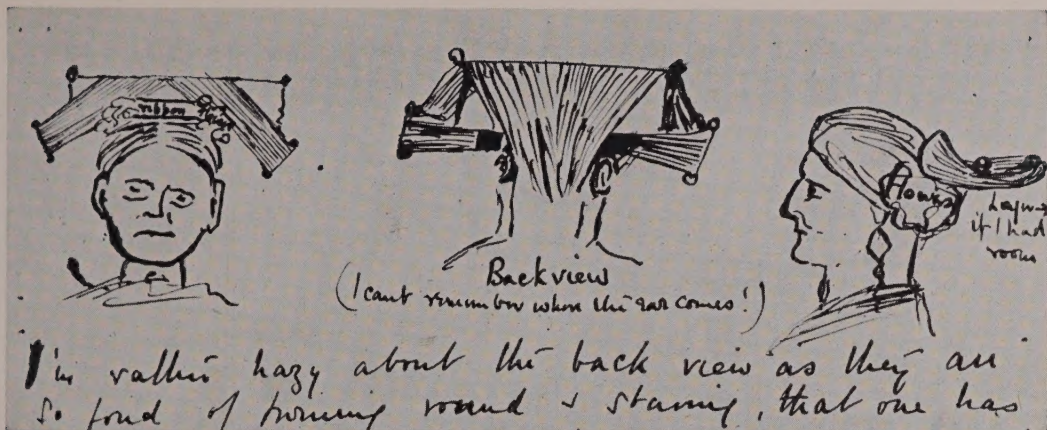
The shops are very picturesque. They are open to the street. Above the entrances are hung various signs of trades. Grotesque monsters with antennae bobbing about on curled wire springs often project from the wooden carving.

All is dilapidated, but must have been very brilliantly coloured when new. The carved woodwork is often gilt, and of beautiful workmanship. A quaint roof of ribbed tiles supported by elaborate eaves is common, but many shops have apparently flat roofs, or a backward tilt, as often the top is fine wooden balustrading. Some shops have red silk streamers with white letters suspended almost to the ground, from the level of the roof; others write their wares on perpendicular stones. Besides the row of shops, there is often a line of stalls between the footpath and the roadway for wheeled traffic. The stalls are mostly for selling food. There is much fruit, and benches are scattered about on the sidewalks, where men drink tea from china bowls, or cleverly guide endless strings of native macaroni to their mouths with chopsticks. The food looks, and smells, very good although one has often no idea what it is made of.

Occasionally a beggar attaches himself to us, but Ralph has some copper cash, about 700 of which are worth 1s. 9d. They are round coins, with a hole through the middle, and 2 or 3 (a quarter of a farthing!) generally send the beggar away.

On the whole I was surprised by the rarity of bad smells. There was often however a large ditch in the middle of the road occasionally crossed by planks or long stones, and full of black mire. The Chinaman certainly appears more washed than the poor Siberian. Rows of men sit having their pigtails plaited, and it is very rare that one





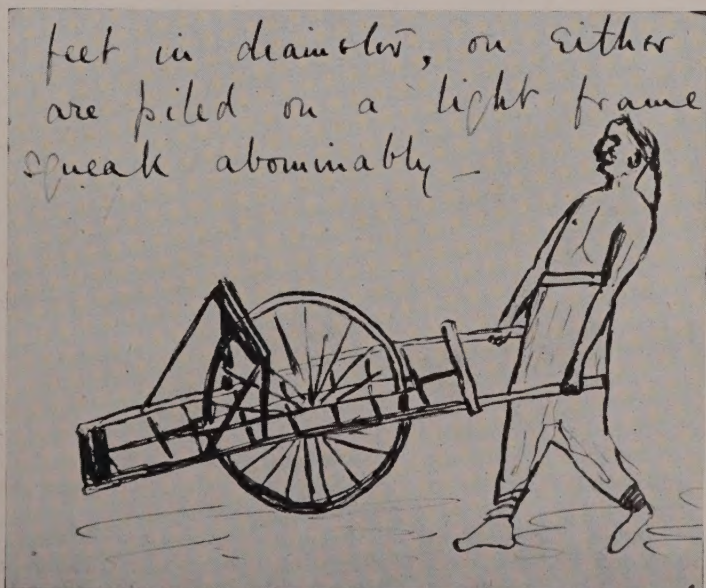
sees a man with unkempt locks. The women of Pekin seem to be mostly Manchus. They are distinguished at once from the Chinese by having natural feet. They have quaint fashions of doing the hair. It is usually plastered together flat like a ribbon, and arranged either at right angles to the head on a flat piece of silvery metal, or stuck out behind like the handle of a saucepan.

I'm rather hazy about the back view as they are so fond of turning round and staring that one has few opportunities of seeing. Perhaps Fanny may like to experiment! Where they have not enough back hair of their own to make a good coiffure, ladies often substitute black ribbon twisted in the same way. It is however usually very obvious, as the dust sticks to it. Some of the older men with very little grey hair have very funny pigtails—very skimpy, and grey near the head, gradually growing thicker and blacker towards the extremity! The children are very quaint. Their clothing is scanty and often consists either of a tiny little coat, which would fit a baby 3 months old, and which thus covers about one-third of their body, or else a very long quilted coat, over which they nearly trip. They derive a particularly impish appearance from the fact that they generally have little tassels, or embryo pig-tails tied with bright ribbon, and projecting from little islands of hair on an otherwise shaven crown. One sees very few girls,

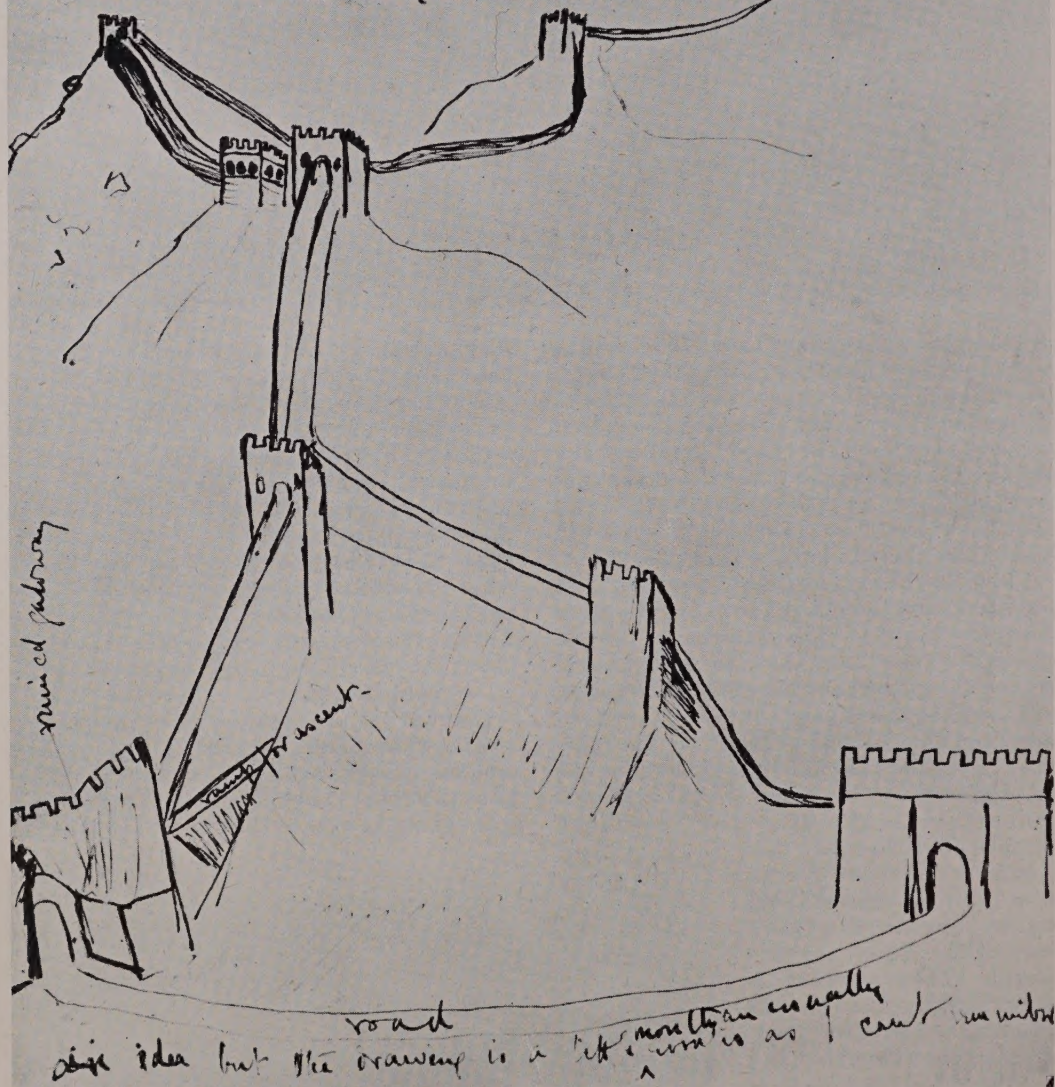
owing no doubt to the prevalence of infanticide, especially of girls.

The streets are very noisy as the steering of palanquins and rickshaws is usually done by shouting. There are many curious and not unmusical street cries. The majority of the stalls have locusts in little wicker baskets, as they admire the chirping. Perhaps it is the same taste which prevents the Chinaman from oiling the wheel of his barrow. They are curious structures with a large wheel three feet in diameter, on either side of which goods are piled on a light framework. They all squeak abominably.

On our return journey we also passed several street bands. The drums and cymbals seemed to be the main part, and the performance was to me simply a noise. I am however told by those who have long lived in China



built inside the wall - Every few hundred yards
it was strengthened by a square tower - This gives



that eventually one comes to admire the native music. It does not appeal to Europeans at first, because it is constructed on the chromatic scale. In places there was a great noise caused by the crackling of fireworks. They are much used for scaring away evil spirits, and almost every shop has bundles of what look like round pieces of silver and gold painted paper strung on strings. The ones we watched were apparently used to summon the public to a theatrical performance. Altogether we have seen 3 of these. They are said to go on for weeks at a time with short

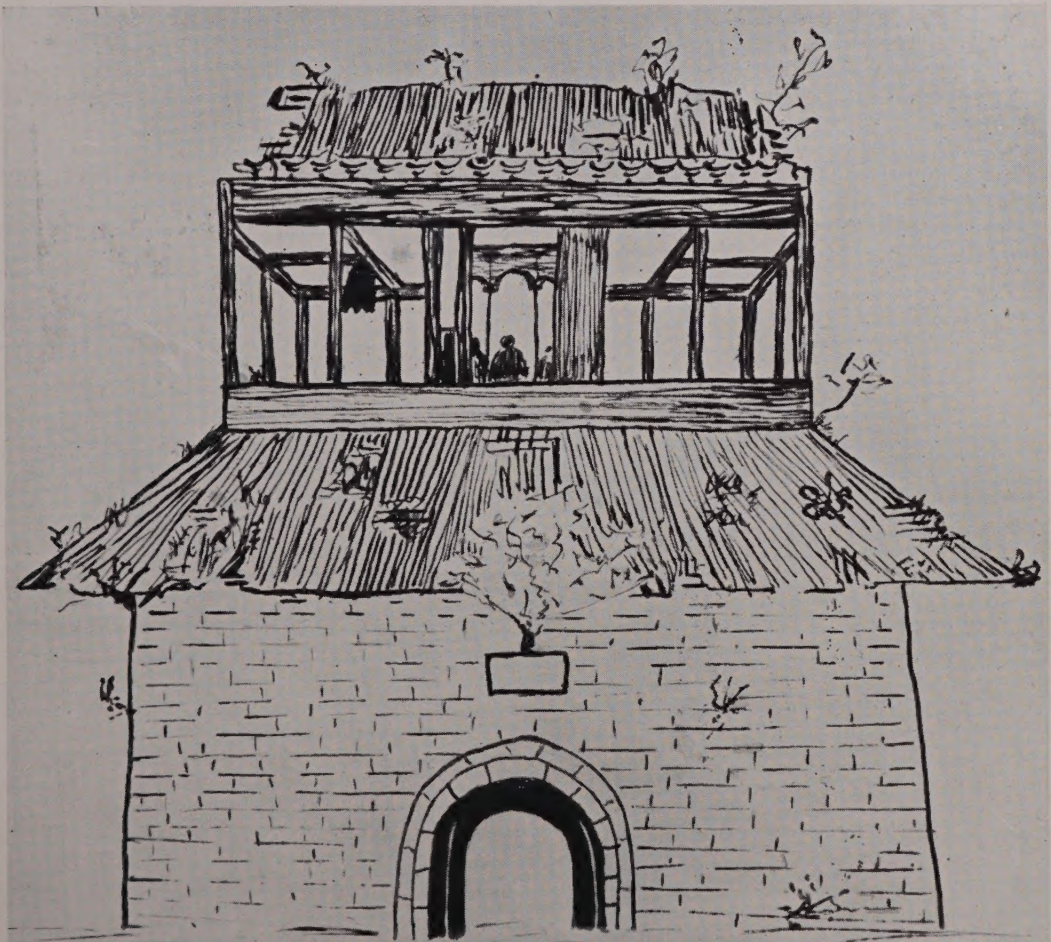
intervals for food and sleep. At Chefoo we saw a historical play. The actors had enormous feathers fastened to their heads and wore gorgeous clothes. The other plays were in the dress of the day. Men take the women's parts. As far as we could see all was free; one walked inside the barrier at Chefoo without paying anything, but of course there may have been reserved seats in front.

After going about a mile we entered the Imperial City. There was another wall inside surrounding the forbidden parts. The roofs are orange colour, with green eaves and pink

walls. These are the sacred colours, and enable one at a distance to recognize temples and royal palaces. We passed down a street with pay offices and many soldiers on either side, and then out through a gate.

Soon after going up the "Drum Tower", a pagoda about 140 feet high, and seeing from the top gallery, about 90 feet high, a good view of Pekin, we went through the North Gate of the city. The walls are about 50 or 60 feet high, and as usual there are 2 gates leading in and out of a yard about 100 yards square, so that if the outer gate were forced the inner one might still be held. We noticed that the sentries were helping themselves freely to food from the neighbouring stalls, without apparently paying.

We had by now come getting on for 4 miles, and there was still a good mile before we got out of the town. The street here was very slummy. Many men were walking about with birds of various sorts tied onto strings and attached to cross-pieces at the end of sticks. Most of the birds were finches, not unlike the robin in plumage, but with the red mark close under the chin. When we finally got out of the town, we went for some miles up an old, dusty watercourse. We here began meeting droves of sheep, and during the day must have passed many thousands. They are curious beasts with flat and fat tails not unlike the sporran worn by a Highlander in front of his kilt. These are ended by an ordinary tail. The sheep have black or brown heads and



Pagoda at ~~Chia~~ Chum Ping Chow

curly horns. They are probably nearly 30 inches high.

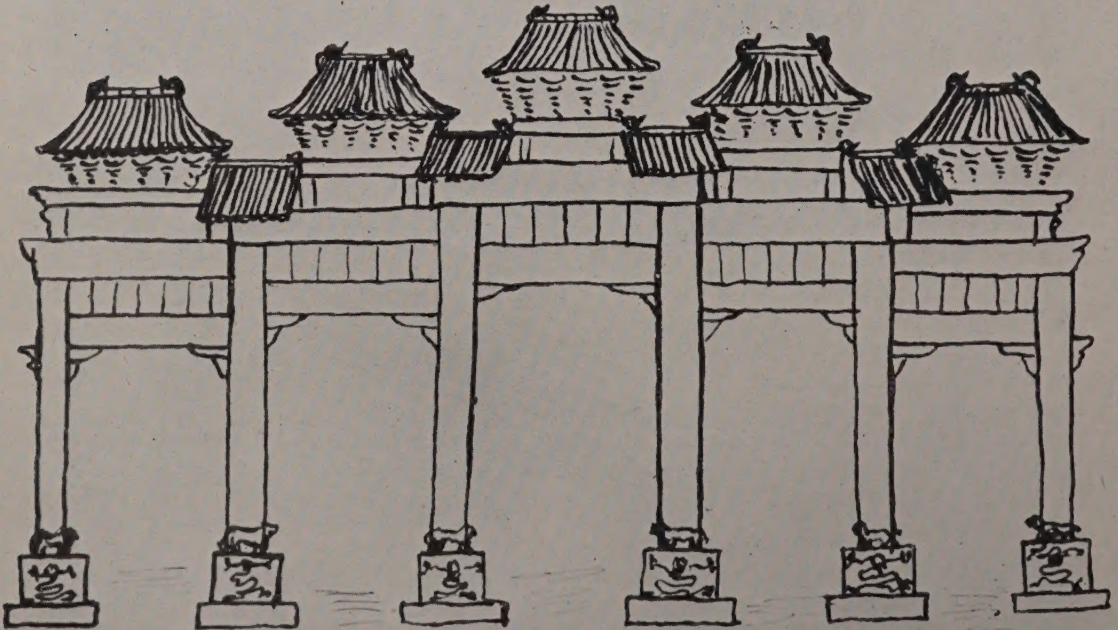
OCTOBER 15, 1902. RAILWAY TO HARBIN

Our last 3 days at Pekin were so taken up with sightseeing that I had no time to write any more. If I went on in detail as I started, I'm afraid I should run short of paper!

We lunched and slept at native hotels the three days of our expedition. They were surprisingly clean. The doors were hung with matting, and the windows of paper stretched on a wooden framework with a small square of gauze for ventilation. The walls were sometimes hung with Chinese paintings. One end of the room is always taken up by a brick platform about 3 feet high, stretching from wall to wall, 15 or 20 feet by 6 or 7 in some cases. This is covered with matting or felt and underneath is a furnace, which is lit in winter. This is the bed. The floors were always tiled, and the table and chairs were usually old and quaint. We tried native food several times and found it quite good, tho' we discarded chopsticks for our own knives and forks.

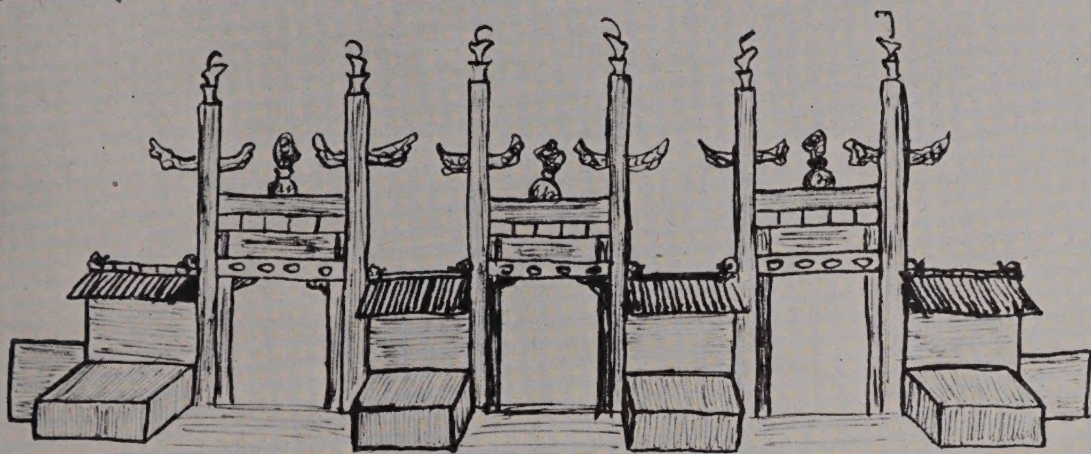
We rode to the Great Wall from Nan Kow—about 13 miles. It was a lovely ride through

precipitous mountains dividing Manchuria from the Ancient China. We passed through a couple of fortified towns with walls running up precipitous slopes, and with steps on the top to enable the defenders to climb them. The gates at either end of these towns were through arches, 20 yards through, at the least, and protected by a second wall and second arch about 100 yards outside. Had one not seen the Great Wall one would have thought these fortifications, dangling from solidly built forts at the top of almost inaccessible heights, wonders of building. In the first town through which we passed was a very pretty arch of white marble covered with fine carvings. The train is too shaky for me to attempt to show what it was like. The archway was five-sided inside but the next course of stones were a rounded arch. There were also in this town several sets of stone uprights, with mouldering beams still projecting from slots, the remains apparently of ornamental *pailous* such as we afterwards saw at the Ming Tombs. Throughout this ride to the Great Wall we were much struck by the dilapidation of all the old buildings. While going through this pass we particularly noticed Buddhas with their heads knocked



The White Marble Pailou

Shi Ma, the last pylon before reaching Ming Tomb
 White marble pillars, lintels etc, old gold tiles & pink
 walls.



really must cut this short, so will pass
 on our side back to Peking, the many with

off, and rusty remains of old bells lying about, half hidden in the grass in the ruins of old temples. Again and again we passed the tottering remains of shrines perched on rocks and approached from the road by steps cut in the rock, or by nothing at all except the niches into which woodwork once had fitted.

We had several sights of the Great Wall before reaching the place where the road goes through it. Here, as in the case of all Chinese gateways, it is double. In some ways I was disappointed at not seeing it from some spot where one could see it stretching away as far as the eye could reach. In the Nan Kow hills this is impossible, as the rising ground soon breaks the line, which one sees reappearing along the edge leading up to some more distant peak. The wall is over 2000 miles long, and I believe nearly 1000 years old. It varies from 40 to 60 feet in height and was about 16 feet broad on top where we measured it. It was faced with brick and stone, and much of the inside appeared to be solid rubble or concrete. The bricks are black and very large. The outer gateway was ruined inside, but we went to the top by means of

a ramp of which there was one each side. There are also occasional doorways leading to flights of steps built inside the wall. Every few hundred yards it was strengthened by a square tower. This [page 44] gives an idea but the drawing is a little more than usually erratic as I can't remember the perspective and the train is very shaky.

After returning to Nan Kow, where we had slept the night before, we picked up our cart, and went 7 or 8 miles to Chun Ping Chow so as to be able to see the Ming Tombs in the morning. In the middle of the town was a very dilapidated pagoda of which we made rough sketches [page 45] on scraps of paper, and thus gathered a great and interested crowd, who must have been much edified by my effort. They at last became so attentive that we had to fight our way back to the hotel.

The next morning we set out at 6 o'clock to see the Ming Tombs and to return to Peking, a ride of nearly 40 miles. The Ming Tombs, where the dynasty of that name are buried, are situated in a valley shaped like a horseshoe, breaking into the southern side of the Nan Kow Mountains. A couple of

miles after leaving Chun Ping Chow, we came upon a white marble pailou. The carvings on it appeared very fine, but we had no time to dismount and look, and I had to content myself with a rough sketch from my mule's back as we approached. This [page 46] is a rough plan of it, reconstructed from one corner which I scrawled down, so it's not very accurate.

After riding about three-quarters of a mile we went through a solid pink building pierced by 3 arches, and with a roof of the usual royal colour, old gold. It must have been hideous when new, but the dilapidated roof which afforded roothold for several trees, and the grass which grew where the pink stucco had fallen away from the brick behind, gave it an unintentionally attractive effect. The third building to which we came was the Bell Tower. Inside was the conventional tortoise supporting the world on its back, and about 100 yards away from each corner were pillars on which a dragon was carved.

We next came upon the famous avenue of stone figures. There were 6 different kinds of beasts and 4 of each kind, the first pair in each case sitting, the next, standing. The horses, elephants and camels were quite good, but the other 3 varieties were imaginary, combining characteristics of deer with those of lions. Two pair were covered with scales. After the beasts, the road passes between figures of men, about a dozen in number. They were all standing and apparently represented soldiers, guards and councillors. They all had the short legs, and general stumpiness which strikes one in all the figures of Buddha. At the end of this avenue was another graceful pailou, Shirin Shi Ma [page 47], after which the road crossed a broad and dry watercourse by the side of a ruined bridge, built of many spars of massive stone. After about 2 miles we came to wooded ground clothing the lower slopes of the hills, and at last came to the wall of the tomb of the first Ming emperor. While we were waiting for the key we had time to look around us. We were in the centre of the semicircle, and the approach along which we had come pointed to the south. On either side of us, a mile or two apart, the orange roofs of the tombs of the other Ming emperors showed up from the green of the trees, which formed a narrow girdle round the valley, and a short distance up the slopes gave place to stone or sparse vegetation.

Entering the tomb through a gate surmounted by a tower, we found ourselves in a grassy court, the first of three. The second was entered through a kind of double

verandah with three flights of steps and delightful white marble balustrading. In the centre of each flight of steps is always a slab of stone set at the same slant, and carved with dragons, etc. Passing through the second court, we enter an enormous hall, supported on wooden pillars about 12 feet in circumference. Some wasps had made a nest in one, just inside the door. The hall must have been about 70 yards long. Crossing it (about 30 or 40 yards), we go out behind a screen and find ourselves in the third court. This one is full of fine trees, cypresses and oaks, and at the back is a tower built over the bricked-up entrance of a tunnel (half a mile long running back into the hill) at the end of which the Emperor was buried. We went up the sloping foundations by an arched passage and reached the gallery of the tower by a sloping ramp returning on itself. The view from thence was the fairest I have ever looked upon. At our backs was the tower, surrounded by trees, and built on a steep slope. In front a broad marble court with fine trees and grass shooting up between the stones. Behind this, roofs once golden, but now toning down with lichens to grey. It doesn't sound very beautiful perhaps, because it is impossible to convey the impression of the bright sun and absolute silence, which from the venerable disrepair of our surroundings appeared not to have been broken, except by the footsteps of a rare visitor, for many years.

I really must cut this short, so will pass over our ride back to Pekin, and the many interesting temples, etc. we saw there. . .

We finally left Sunday morning having intended to go Saturday but being prevented because Bourmeister (the Russian servant) missed the train with the luggage. We reached Yingkow Monday night, too late to cross the river, as the Russians allow no boats to move about after 8 p.m. We therefore slept in the train which luckily remained in the station, and were able with difficulty to get some bread from an empty restaurant carriage, off which and jam we made a good meal. We crossed to Newchwang next morning (Tuesday) went to the station on the East Bank of the Liao by the Government steamer, which was too late for Bourmeister to get onto the train. Fortunately he caught us up at Tashihkiao whence we got a train for Harbin that (Tuesday) night. As we are now 8 hours late, we shall arrive at Harbin tonight too late to catch the train for Vladivostock and will have to wait a day. Railway travelling on Russian lines seems specially organized to ensure the discomfort of passengers!



Colours of Peking

Notes and Photographs by HEDDA MORRISON

One of the first things to strike the visitor to Peking is the beauty of golden roofs seen in the North China sunlight. Golden yellow was the Imperial colour and so all the Imperial palaces and many of the temples were adorned with glazed, golden roof-tiles, an adaptation of Chinese skill in ceramics to serve the purpose of architectural ornament. The tile-makers seemed to have had difficulty with some colours. There are no red tiles, the colour of good fortune, or white tiles, the colour of mourning. But white and red still play their part in the Peking scene for the ornamental white dagobas, or Buddhist memorials, are very conspicuous and walls and gateways are often painted red, fading in time to a rich bronze colour. Above is the dagoba in the Pei Hai or "North Sea", one of the Imperial parks, framed in a green-tiled pailou or ornamental archway



Blue is the colour of heaven ; hence various buildings in the Temple of Heaven have blue roofs. Other tiles are green, the precious jade colour, and black. These yellow tiles are on one of the elaborate pavilions outside the Hall of High Heaven which is popularly known as the Temple of Rain. It was here that prayers for rain used to be offered up by the Emperor. The pavilions have no fewer than seventy-two roof-ridges in their construction and were originally built during the reign of the Ming Emperor Chia Ching (1521-66)

Not all the tiles are on roof-tops: they can be let into a spirit-screen, the wall which custom demands must stand just within a gateway to bar direct access. The object is to keep out evil spirits who, as is well known, cannot travel round corners. The wall here has faded from the original bright red but the tiles retain their lustre. The design is one of stylized peonies, perhaps the most popular of all Chinese flowers, and the wall and its plaque are to be found in the Chung Hai, a park lying to the south of the Pei Hai





Tiles of blue, the colour of heaven, atop a white marble wall, distinguish a gateway at the Altar of Heaven, the architectural embodiment of venerable Chinese conceptions of life and the universe. It was the Empire's most sacred place, to which the Emperor, as "Son of Heaven" and intermediary between his people and God, came once a year at the time of the winter solstice and, surrounded by marble terraces, offered sacrifice at dawn



The preceding photographs are all of important Imperial buildings. But colours were not an Imperial prerogative. Every Chinese sought and seeks to bring something of colour into his home, even if only a cheap coloured print of a Door God. Private houses have plain grey tiles but many beautiful things are to be found within them. As in the Temple of Heaven, so in a Peking courtyard are blue and white, the colours of a Ming vase



Anscocolor photographs by the author

A cluster of cottages with a church and a chapel, a general store and a public house, Horsehouse nestles between the fells of Coverdale where no new dwelling-house has been built for 150 years

The Yorkshire Dales

by IAN MEIKLEJOHN

THESE days of austerity and legislative restrictions, of rapidly-changing social conditions, of high-pressure work at machines producing prefabricated utility goods, induce by reaction a demand for spaciousness, solidity and reality. Those in the big industrial cities who feel it respond to this demand in their leisure hours whilst others have abandoned completely the life of the cities to work in the country.

The atmosphere of spaciousness and solidity is most evident in England in the Yorkshire Dales. The West Country, Leicestershire and East Anglia may advance rival claims, but this part of England, perhaps not so well

known, can substantiate its claims to the full. The Dales country is bounded on the east by the Great North Road; on the south by the industrial cities of Yorkshire; and on the north by the Lake District and the coal and steel of Durham. To the west there is no firm dividing line; but westwards of Wharfedale it will be observed that the character of the country changes perceptibly, the stone walls give way to fences and hedgerows, and the Dale country merges slowly into that of Lancashire. Travellers on either business or pleasure skirt round the edges of this country, travelling onwards by car or rail to the cities or popular holiday centres. The Dale coun-



Upper Wharfedale will appeal to artist and sportsman alike. (Right) The Wharfe flows gently through languid pools where trout, if not large, are lively and provide good sport. (Above) At Kettlewell, near the top of the dale, a track marked "Impassable for motors" leaves the main road to climb sharply across moors full of grouse. Its surface soon disappears and the sportsman who ventures further by car finds himself bumping along on the foundation of boulders beneath



try boasts no big cities, it does not set out to attract tourists; but there it lies, many hundreds of square miles of it, with its quiet little market towns, ready to give to those who seek the priceless gifts of peace and relaxation.

It is a strange symptom of these disturbed times that a recommendation of a place to spend a holiday should require to be amplified by enumerating the pastimes offered, in order to forestall the question: "But what do you do all day?" Should indeed a holiday—a period of rest and recuperation—need to have each hour crowded with action? In the Dales you may rest and recuperate, 'ramp over moors and heather, breathe in fresh invigorating air, absorb the beauty of your country and see places where its proud history was made.

Here is a land of heather-covered moor and fell, gently-rounded hills formed in the glacial age and woodland through which rivers, some large and some small, run their courses: rivers of varying moods, flowing gently over boulders and through trout-filled pools in summer, but in winter rushing madly

on their way, hurtling their brownish water over rocky defiles to form "Forces", some high and narrow—High Force and Hardraw Force—others wider and terraced—Aysgarth and Kildon. The rivers are spanned at intervals by fine old bridges of the pack-horse days and abound in those arrangements of physical and natural features, texture and colouring which have made the beauty of England renowned the world over. This is no hard majestic beauty of lofty mountains and snow-capped peaks; it is a mellowed beauty of soft rounded features, luscious green grass and fine old trees. The villages nestle on the banks of the rivers, the colour and texture of their centuries-old stone harmonizing with the natural surroundings.

It is this stone-work which gives the feeling of solidity. There are no flimsy wooden fences which scarce restrain the cattle and fail to break the force of the wind; but, instead, mile upon mile of dry-stone walling representing many weeks of skilled work and the use of ton upon ton of stone. The whole

The high Dale country of Yorkshire lies on the North of England's watershed. To the north-east of Kettlewell, forming the 2000-ft ridge of this watershed, are the Great and Little Whernsides





Ian Meikle

At Keld in Swaledale is Kisdon, an example of a wide and terraced "force". This word (cf. Norwegian foss : waterfall) derives, like many place-names in the Dales, from the days of the Vikings

is designed to withstand the pressure of fiercely-driven snow and to form a windbreak in the lee of which sheep and cattle may shelter. The barns and cottages too have thick stone walls; the roofs are of heavy stone slates which remain in place through many a season's gales. Windows are small, many of them with deep mullions—good, solid handwork built to last a century and more.

The Dales are individual; each has a style and speciality although it may not be separated by many miles from its neighbour. Tecsedale, with its characteristic whitewashed cottages, has an almost Highland air; Wensleydale, famous for its cheeses, is soft and green; Swaledale, renowned for its sheep, has more rocky fell-tops and has a harder comeliness; while Wharfedale is broader and more open and every mile of it presents a picture to delight the artist.

A glance at a map will show the wealth of history which was made here. Famous names abound: Castle Bolton, Richard the Third's

Middleham, Coverham, Jervaulx and Bolton Abbey. At one time, strange though it may seem, there was some industrial activity. "Old lead mines", "old coal shaft" occur frequently in close proximity to "Hunter's Lodge" and "Deer Forest". There is a



A. J. Thornton



Doone



Ian Meiklejohn

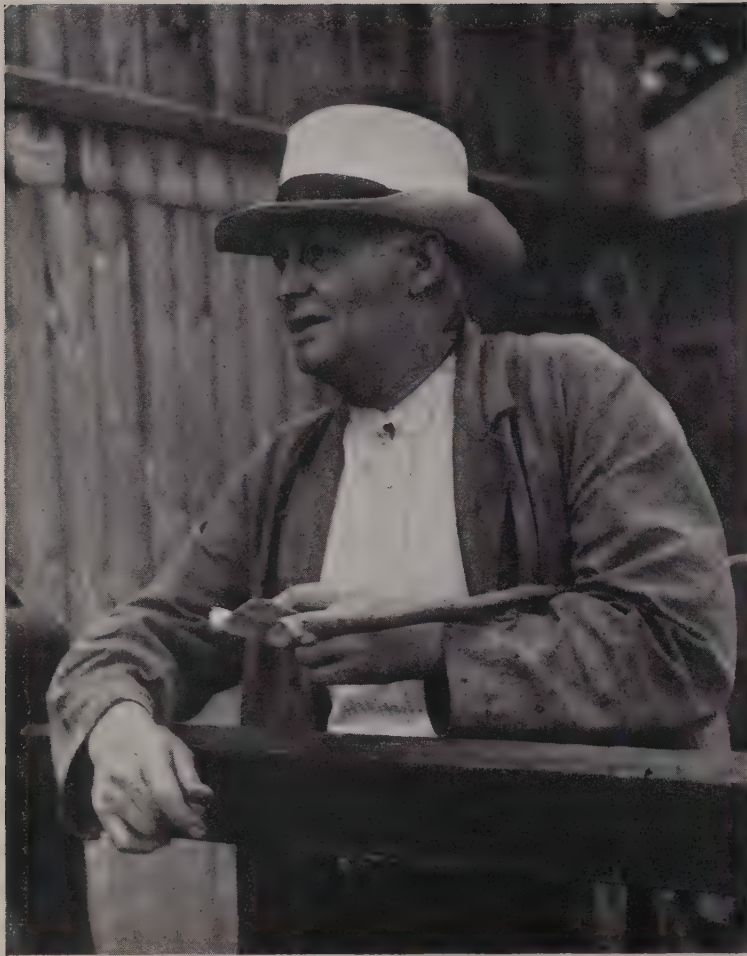
(Above) The villages in the Dales have solid stone cottages with heavy slate roofs and square chimney-stacks set astride the ridgepole. There are few modern conveniences — lighting, for example, is by oil-lamp — but the average rent in these parts is only five shillings a week. (Left) Formerly a source of the well-known Wensleydale cheese, this 17th-century press stands at Askrigg. Six feet in height, it is still in working order though not used for fifty years. Pressure is exerted through links by the solid stone slab suspended over a pit



The Yorkshire
 For the student of history or architecture the Yorkshire Dales abound in scenes and buildings of interest.
 (Above) Castle Bolton, grey home of the Scrope family, was one of Mary Queen of Scots' many prisons.
 (Below) Founded by the Augustinian Canons, Bolton Abbey at the foot of Wharfedale dates from 1151

Valley





J. Allan Cash

A Dales farmer: realist, rugged, hard-working and thrifty. Though reserved, he always finds time to "give the crack"

tale of the cottager who had only to lift the flags in his kitchen to uncover his winter supply of coal; but while peat is still cut up on the fells, the lead and coal mines have been abandoned.

An eerie note is struck by "Dead Man's Hill" near Horsehouse. In the 17th century the main road between the industrial centres of Scotland and Yorkshire crossed the moors at this place. Bagmen with their ponies laden with wares normally spent the night and stabled their animals at Horsehouse. A party of them, delayed, became benighted on the moor, and sought refuge at the cottage kept by two women on Dead Man's Hill. Here they were first well fed, then beheaded and their corpses thrown into a pit. The women were brought to justice, betrayed by the unusual number of Paisley shawls and Scots ponies to be seen in Coverdale and Nidder-

dale. Now all is peaceful and free from intrusion save for an occasional raid by a townsman in search of a bird, a fish or a dozen eggs, or by government inspectors in the execution of their peculiar duties.

"Work or Want"—no Dalesman should ever want. He has no fixed office hours; his work begins at dawn and ends at dusk, seven days a week. His financial reward is meagre, but the true measure of his reward lies not in his monetary income but in a happiness of spirit coming from the sense of good work well done. He has no time to plague his master for increased wages; his master, the land, rewards him strictly according to his labour and against this award there is no appeal. The farms are small, capable of being worked by a man and his family. There are fields of cutting grass, some grazing land and an allotment of moorland: farms for sheep and cattle, able to provide a living for the thrifty.

Thrift, the outstanding characteristic of the Dalesman, is what gives the impression of reality. No use to retain anything which is unproductive or inadequate to do its share of work in the battle for production upon which existence depends. Consequently the Dalesman's

possessions have stood the test of time; the contents of his house, with constant use, have become more than mere chattels, more even than old friends; they are a part of him. The connoisseur will find among them much to admire but he will have a hard task to make a bargain.

The Dalesman takes an occasional holiday when he can arrange for his neighbour to milk and tend his beasts. Perhaps for a week each year he will go with his family either to the cities or to the popular seaside resorts, returning the better for the change of environment and outlook with many a tale to tell. Pausing for a moment at the end of the tale, he is sure to add: "Ee, but it's grand to be back 'ome again". This love of home is strong in all who live and work on the land but it is nowhere stronger than in those who live in the Dales of peace and contentment.

The Men Behind Modern Geography

IV. The Founders of the Royal Geographical Society

by G. R. CRONE

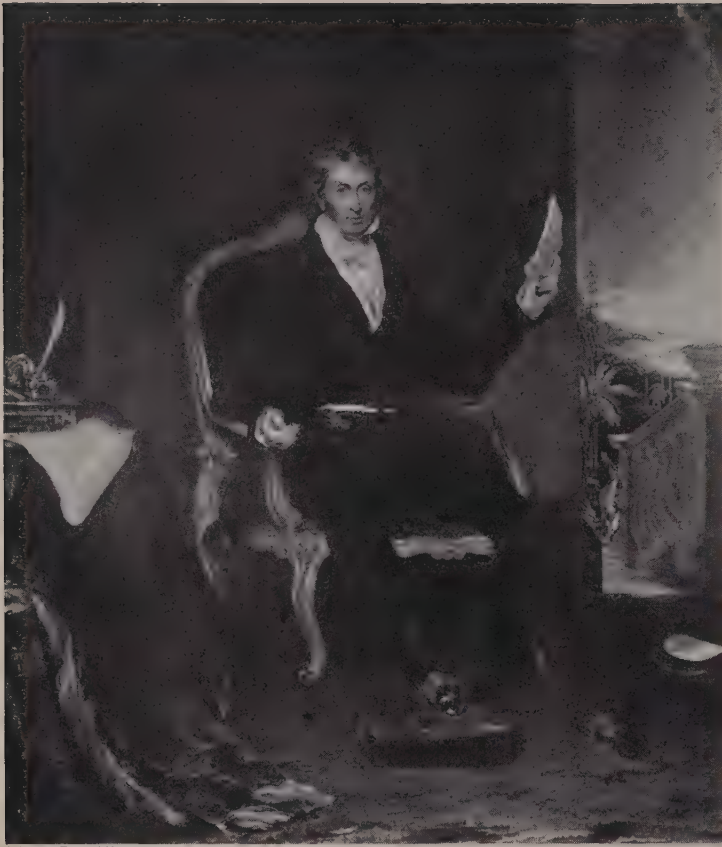
In previous articles Mr Crone, who is Librarian of the Royal Geographical Society, has shown how German geographers began the moulding of many miscellaneous observations into an orderly system. To extend the foundations of such a system, by promoting scientific exploration and assembling precisely recorded facts, became the principal task of British geographers in the 19th century

DURING the year 1828 two contributors to the London press came forward to advocate the formation of a geographical society in England. One lamented that the nation "the very foremost in promoting geographical discoveries" should possess no common meeting-ground for travellers and scientific men; the other hoped that through such a society geography might "attain the rank of a science, which it should, but does not at present, possess in England". These two points of view foreshadow very closely the progress of geography in the half century which followed; the British contribution to its development still lay principally in discovery and exploration, and at the end of that period geography had not attained the status of an independent science.

Between 1828 and 1830 various negotiations for the formation of a society were in progress. In these negotiations members of the Raleigh Club, a dining club for travellers, were prominent; and they were finally successful. If we examine the list of those who may be considered the founders of the Royal Geographical Society, we see that they were distinguished in many fields of activity; and, consequently, they interpreted the objects of the new society very widely. At their head was Sir John Barrow, Secretary of the Admiralty and a keen and persistent supporter of Arctic exploration. The active branch of the Navy was represented by Captain W. H. Smyth, an officer of wide experience particularly in hydrographical surveying, and later a President. Survey was also represented by General T. F. Colby, Director of the Ordnance Survey, then producing one of the finest series of topographical maps in existence, and by Francis Bailey, the

President of the Royal Astronomical Society, known also in his youth as an adventurous traveller in North America. There was the diplomat, the Hon. Mountstuart Elphinstone, who had conducted a mission in 1808 to Afghanistan, then an almost unknown country; and there was the celebrated botanist Robert Brown, the companion of Flinders to Australia in H.M.S. *Investigator* and a friend of Humboldt. To them we may add G. C. Renouard, at one time a Professor of Arabic, and James Britton, antiquarian and man of letters, who had been particularly prominent in the preliminary negotiations. One name, that of Roderick Impey Murchison, has been omitted from this list, but his services are more fittingly dealt with later.

Under the guidance of these men, and with Royal patronage, the Society made a successful start. The precise aims it had set for itself were comprehensive: to collect and print interesting and useful facts and discoveries in, be it noted, "a cheap form"; to accumulate a library of the best books on geography and a complete collection of maps and charts from the earliest period; to secure the best instruments adapted to the needs of the traveller; to prepare brief instructions for the intending traveller on methods of travel and researches to be carried out—from which the well-known volumes *Hints to Travellers* have sprung; and to maintain contacts with foreign geographers. One of the first acts of the Council was to adopt a list of Foreign Honorary Members, in which were included the names of Alexander von Humboldt and Karl Ritter. It is curious that the objects of the Society, as summarized above, do not mention the communication of papers to meetings of the Society; perhaps that was



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The Hon. Mountstuart Elphinstone (1779-1859) helped to bring to life the Royal Geographical Society in 1830, shortly after his return from thirty-three years' service in India, during which he had been for a time Ambassador in the then almost unknown Afghanistan. One of the founders of the Indian Empire, he was known for unselfishness and modesty; a worthy member of the distinguished company of public servants, scientists, explorers, and scholars who first laid the foundations of the Society

taken for granted. But that was in fact the method by which it mainly disseminated information; the founders did not hesitate to characterize geography as "that most important and entertaining branch of knowledge", capable of affording "a copious source of rational amusement". At first the communications were largely papers received from government offices—the Admiralty, Colonial Office, India Office, and Foreign Office—but gradually papers from travellers, scholars and residents in all parts of the globe came in, and the proceedings became less official in character. In its early years, the Society was able to support the journeys of Robert Schomburgk in British Guiana, and of George Back in the Canadian Arctic, and to obtain government support for exploratory work in Western Australia.

From the first, the Society received an annual premium (subsequently altered to two gold medals) from its Royal patron, to mark outstanding achievements. The first Royal Premium was awarded to Richard Lander, who in 1830 had established beyond doubt that the river Niger debouched into the Gulf of Guinea and did not terminate in a Central

African swamp. The second Premium went to John Biscoe for his circumnavigation of the Antarctic. Thus at the very beginning the Society was associated with the two continents in which perhaps its greatest achievements were won. In Africa also it was carrying on the work of the "African Association for the Discovery of the Interior Parts of Africa", founded by Sir Joseph Banks and others in 1788, and merged with it in 1831. An early recipient of the Patron's Medal was Captain Robert Fitzroy, on the return of the *Beagle* in 1837: the following year, the young naturalist Charles Darwin joined the Society, and later served for a period on the Council.

Geography appears to have been much to the fore in London during the early thirties. In 1833 the first chair of geography was established at University College. The nature of geography as understood by the promoters was certainly comprehensive: "to explore the portions of space allotted to man; to portray his habitations therein, diversified as they are in geological structure, in climate, in vegetation, in animal life; to show their connection with his form, his habits, the temper of his mind, his language, his laws, his institutions;

Sir Roderick Impey Murchison (1792-1871) first became President of the Royal Geographical Society in 1843. An enthusiast for exploration, he used his authority to encourage many famous expeditions, and left the Society firmly established with its membership more than trebled. A geologist of international repute, he made major contributions to the study of the geology of Wales and of Russia. He was one of the founders of the British Association and the Imperial Russian Geographical Society



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and to deduce general principles, by which, under similar circumstances, similar results may be inferred." It seems safe to conclude that whoever wrote down this definition was acquainted with the works of Karl Ritter.

The College appointed Captain Maconochie, R.N., the Secretary of the Royal Geographical Society, to this chair, and for a time he combined the two posts. He lectured for a few terms, before accepting an appointment abroad, but his experience showed that geography was still unappreciated here; as the College reported: it "seems not yet to be considered as a part of general education. Not even the acknowledged distinction of the late Professor could obtain a numerous class." No sufficiently qualified successor could be found, and the vacancy was never filled.

After a good start, in fact, the fortunes of geography began to decline generally. The R.G.S. went through some lean years in the "hungry forties" when social unrest and financial stringency disturbed the country. At one point, it appeared that the dissolution of the Society was inevitable, but from this inglorious end it was rescued by two men, Admiral Smyth and Sir Roderick Murchison.

Gradually it was re-established as an active promoter of exploration, and was able, when the time came, to contribute decisively to the cause of geographical education in this country. By administrative ability and common sense, Admiral Smyth restored financial stability during his presidency from 1849 to 1851, when Roderick Impey Murchison was re-elected President.

Murchison at that time held a position somewhat similar to that occupied by Sir Joseph Banks at the close of the 18th century. He was energetic and of considerable scientific standing—with sufficient wealth to give effect to his plans, and to win popularity for the Society through his open-handed hospitality. After service in the Army he had followed for a time the life of a country squire, until, through his acquaintance with Sir Humphrey Davy who aroused in him a spirit of scientific enquiry, he had become almost by accident a geologist, and ultimately a geologist of international repute. This reputation was built first upon his work in elucidating the geological succession in Wales, set forth in his book *The Silurian System*, and secondly upon two extensive journeys in

Russia, as a result of which he established the Permian system. His experiences in Russia impressed upon him the necessity of exploratory survey as a basis of all further scientific research, and it was from this standpoint that he approached geography, coupled with his interest in the physical features and history of the earth's crust.

Murchison's achievement, therefore, lay in the promotion of exploration, and he was fortunate in exercising his authority at a time when many geographical problems were being solved, in the Arctic, in Australia, and above all in Africa. He staunchly seconded Lady Franklin's relief effort in search of her husband's Arctic expedition after government assistance had ended; and he continually pressed for the despatch of expeditions to Australia, mainly in the north-west, some of which were organized by the Society for the government; but it was in Africa that his efforts met with greatest success.

This was the epoch of Livingstone's three great expeditions, for the first of which he received the Gold Medal of the Society, and for the second and third its active assistance and support. Concurrently Burton and Speke were despatched to East Africa to become the first Europeans to reach Lake Tanganyika; and Speke, with Grant, was sent out again, to be successful in finding the solution of the age-old problem, the main source of the Nile, in the Victoria Nyanza. Murchison's relations with Livingstone were particularly close and cordial, and the explorer wrote of him towards the end of his life as "the best friend I ever had—true, warm, and abiding. He loved me more than I deserved".

At the end of his presidency he left the Society firmly established and enjoying a world-wide reputation, the membership having risen from six hundred to over two thousand. The establishment of Geography as a separate section of the British Association in 1857, due to his influence, also served to keep the subject before the public.

In his lengthy annual addresses to the Society on the progress of geography Murchison rarely ventured to deal with its 'philosophy'. He was, however, as occasional references show, abreast of developments in Germany; on the whole he was closer to Humboldt's standpoint than to Ritter's, and the *Kosmos* was his guide in these matters. In view of his own training and experience it was natural that he should stress the physical basis of geography, "all kinds of special geography being mere grafts upon this original stock"; and throughout his life he

regarded physical geography and geology as "inseparable scientific twins". From Ritter he learnt "to study the configuration of the great masses of land", but he appears to have regarded Ritter as essentially a historian.

But if Murchison was content to take the philosophy of geography for granted, while encouraging the study of physical geography, the ideas of modern geography were making some headway throughout this period. No complete translation of Ritter's life-work seems to have been published, though Humboldt's *Kosmos* was translated soon after its publication in Germany. By the end of the period we are considering, about 1870, ideas which derive from Ritter's works were fairly widely diffused. In the University of Oxford, particularly, geography was recognized by the historians as a valuable ally, though T. H. Buckle's attempt in his *History of Civilization* to demonstrate the influence of geographical factors on national culture had not been a success (1857-61). The full recognition of geography was delayed by the splitting of the subject into two: physical geography, which had become the preserve of the geologists, and 'academic' geography, taught in relation to classics and history, and in itself unlikely to win recognition as a distinct discipline.

Before the end of Murchison's life more promising signs for the future were apparent. Murchison himself became very conservative and out of touch with progress even in geology, and his social evenings, with the 'lionizing' of the latest African traveller, antagonized more single-minded scientists. But other active members of the Society such as Francis Galton and Clements Markham were alive to the need for change.

In the movement that led to the revival of geography an important, if perhaps indirect, part was played by the revolution in ideas which followed the publication of Darwin's *Origin of Species* in 1859. This in time concentrated attention on the natural environment, viewed as the field on which man was fighting his battle for survival, and gave rise particularly in Germany to even more dogmatic theories of political geography than those of Ritter. In England, also, Darwin's example as a scientific traveller had been followed by A. R. Wallace, H. W. Bates, Francis Galton and others, and it was men of this calibre who ultimately led the Society to adopt and press forward the 'new' geography in the Universities and the schools. Thus the Society's support of travel and exploration was at length notably vindicated.

Background to the Saar

by RICHARD SCOTT



All photographs by Alnasy from Pictorial F

Every newspaper reference to the Saar—a piece of grit round which the pearl of Western Union may yet form—raises questions relating to its past history or present status. To answer them is the aim of the following article by the Diplomatic Correspondent of the Manchester Guardian

THERE are, and there always have been, certain areas in Europe which have acquired, or had thrust upon them, a political, a strategic and an economic importance out of all proportion to their size or to the numbers of their population. Such an area is the Saar territory.

In the last hundred and fifty years this small territory, comprising about 390 square miles and with a population of about 900,000, lying south of the Grand Duchy of Luxembourg, between France and Germany, has changed hands no fewer than five times between these two great rival neighbours. Today the administration of the Saar is in the hands of two men—one a Frenchman and the other a German. The former is M. Gilbert Grandval, the French Representative in the Saar; the latter is Herr Johannes Hoffmann, Prime Minister of the Saar Government.

The Franco-German tug of war for possession of this small, intensely industrial area goes on.

Before setting out the developments which led up to the present uncertain, slightly anomalous political position in which the Saar finds itself, let us very briefly glimpse at the sort of country it is. Flowing through the middle of the territory is the river from which it derives its name, a tributary of the Moselle. In some ways Nature does not seem to have designed the Saar to be, as it is, one of the richest sources of coal and one of the most intensively industrialized areas in Europe. The countryside is lovely. You can drive down the wooded valley of the Saar and feel yourself to be a hundred miles from the nearest town or factory, and then, around the next bend, you find the massed chimneys of Saarbrücken, the capital, spread out before you. The countryside pushes right up against



Prime Minister of the Saar, Herr Johannes Hoffmann is a model family man ; he leads the largest political party, the Christian Socialists, and used to edit the foremost Saarbrücken newspaper

the great steel plants and the coal mines.

Steel and coal: these are of course the great sources of the wealth of the Saar. It is around these two industries that the life of the Saar and its 271,000 workers is primarily concentrated. After the heavy destruction during the last war both industries are now almost back to their pre-war level. Last year 14,200,000 tons of coal were won from the Saar mines. It is of high quality, particularly suitable for the needs of the steel plants. This output is only 200,000 tons less than that of 1938. The anticipated coal output for 1950 is expected to be 15,200,000 tons, rising to 17,000,000 tons in 1953. Steel output in the Saar in 1938, when all German industry was geared to maximum war production, was 2,500,000 tons. As a result of the vast war destruction, steel production in the territory was running at a mere 700,000 tons in 1947. The great steel works of Neunkirchen, which alone produced 800,000 tons of steel before the war, are still out of action. Yet

production from the other plants in 1949 was 1,800,000 tons.

This considerable addition to the coal and steel resources of France still does not bring her total up to that of Western Germany. If it were diverted to German uses it would leave France lagging far behind.

Politically autonomous the territory is linked economically to France within the French customs union. Let us now examine how this situation came about.

It is perhaps unnecessary to go back into history beyond World War I, though it is worth recalling that the Saar has been linked economically with northern Lorraine—with the exception of the five years following the 1935 plebiscite—ever since 1870, when Alsace and Lorraine were seized by Germany. The economies of the two areas have tended therefore, inevitably, to become closely interdependent. A natural identity of interest has developed. Nature has further strengthened the link by locating in Lorraine the iron ore

A distinguished Resistance leader, M. Gilbert Grandval is High Commissioner for France, which supplies the Saar's main imports and takes most of its exports. Without imports of food the Saar could subsist for only a month and a half

needed by the steel plants of the Saar.

The population of the Saar speaks German. When the Kaiser's empire lay devastated and broken in 1918 the Saar had for half a century formed a part of it. France, to whom Alsace and Lorraine were then returned, also made strong claims to the Saar. These she based on economic and strategic grounds and as compensation for her enormous war losses at the hands of the Germans.

The Treaty of Versailles provided for the economic attachment of the Saar to France, for the Saar coal mines to become the property of the French state and for the Saarlanders, while maintaining their German nationality, to be given the special status of "inhabitants of the Saar". This position, which was unique in history, lasted for nearly sixteen years—from 1920 to 1935. The Versailles Treaty had provided for the holding of a plebiscite after fifteen years by which the Saarlanders should determine their future.

The Saar was the first of the many "final territorial demands" which Hitler was to make upon the world after he came to power. Terrific propaganda was launched against the Saar people by Berlin in preparation for the 1935 plebiscite. The French, on the other hand, were ominously apathetic. In part this can be explained by their acceptance of the Nazi cry that only the Saar lay in the way of lasting Franco-German friendship. For



this friendship France was ready to pay the price of the Saar.

Three alternatives were given to the Saarlanders. They could vote for the return of the territory to the German Reich, the maintenance of the *status quo* or the union of the Saar with France. 477,109 voted for the first alternative; 46,513 voted for the second and only 4124 for union with France. The plebiscite was held under the auspices of the League of Nations. Politically, the Saarlander has shown himself to be a fickle friend to either of his suitors. In 1935 there were some obvious special reasons which drove him towards the Reich. In 1947, faced with a roughly similar choice, but under very different circumstances, the Saarlanders voted for economic union with France by about the same majority as they had earlier opted for union with Germany.

From 1935 to the end of the last war the Saar was part of the German Reich. After the war it was administered by the French as part of their zone of occupation under Colonel Gilbert Grandval as Military Governor.

In September 1946, after the results of the



A. J. Thornton



With a high level of production and almost no unemployment, the Saar coalminers, using French currency to buy unrationed food, remember that their output increases the French total to two-thirds that of Western Germany but could make the Western German total twice the French

first post-war municipal elections to be held in the Saar had shown an overwhelming support for the political parties publicly attached to the economic union of the Saar with France. M. Georges Bidault, then French Foreign Minister, first formally raised the question of the status of the Saar with his Western colleagues. Early in the following year, at the meeting of the Council of Foreign Ministers in Moscow, formal approval was given by the British and American Governments (but withheld by the Soviet Government) to this economic union, subject to confirmation at the final peace settlement with Germany. As a result of this support the French Government encouraged the Saar Parliament to vote on a new constitution, the basis of which was political autonomy (with the exception of foreign affairs) and economic attachment to France. On December 15,

1947, the Saar Parliament adopted this constitution unanimously with the exception of the two Communists' votes. Steps were immediately taken to give full effect to its political and economic provisions. First, the French franc was introduced as the sole legal currency of the territory. The people of the Saar were given the same food rations as in France. Colonel Grandval, the Military Governor, became M. Grandval, the High Commissioner and Herr Johannes Hoffmann became Prime Minister.

The Saar was thus now, pending the German peace treaty, a semi-independent state. Its claim to this status was considerably enhanced when, together with the German Federal Government, it was accepted in principle by the twelve States-Members of the Council of Europe and by the United States Government as a suitable candidate for Associate membership of the Council—that is to say as a member of the Consultative Assembly but not of the Committee of Ministers.

Until this moment little comment had come from Germany concerning the developments in the Saar. Dr Adenauer, the German Chancellor, had made it clear that, while regretting the decision of the Council of Europe to invite the Saar as a separate member, he would not regard this as cause for refusing to accept membership for Western Germany. Then it became known that the French and

the Saar Governments were going to conclude a number of Conventions, designed to give judicial effect to the economic union, of which the chief would amount to the lease by France of the Saar coal mines for fifty years. This produced a storm of hostile German criticism which has not been fully assuaged by the reaffirmation by the Western powers that only at the peace settlement with Germany can the future status of the Saar be finally decided.

Thus the future of the Saar is far from settled. It continues to be a source of friction between Germany and France. Many people see the only hopeful final solution to this long-standing and currently serious problem to be the creation of a real Western Union or a large economic union into the framework of which could fit at least the Saar, the Ruhr, Alsace-Lorraine and the Belgian-Luxembourg industrial basin.

Ecuador—Peru—Bolivia

II. People

by GEORGE ROCK

Photographs by A. COSTA

Mr Rock's article in our May number, likewise illustrated by Mr Costa, portrayed the landscape of the three Andean republics through which they recently journeyed together. A third article, in July, will show the characteristics of an architecture peculiar to the region and its people

WE saw great variety of landscape and we found many levels of civilization represented in Ecuador, Peru, and Bolivia. In an area of over a million square miles, these countries seemed underpopulated with only 14,500,000 inhabitants. The various tribes of Indians are numerically predominant, over sixty per cent in Bolivia and at least fifty per cent in Peru and Ecuador, with perhaps five per cent of whites and the remainder mestizo of different degrees of white, Negro and Indian blood. There are small percentages of Negroes and Chinese in the largely white coastal cities, adding further to the medley of complicated mixtures. However, though run by only a small fraction of the whiter population, the countries have remained chiefly Indian.

All were once parts of the Inca Empire—which, according to the legends, was founded by the Children of the Sun, who descended to the earth at Cuzco in a blaze of light and gold. By the 13th century their kingdom had begun to expand, first south through present-day Bolivia and later along the Pacific coast. Finally, after protracted warfare and negotiations, in the 15th century the empire admitted to the status of inferior partner the Quito Kingdom of northern Ecuador. There, as wherever the Incas established their rule, they imposed their all-embracing system, beginning with village supervision by one representative for each ten households. The elaborate ramifications of bureaucracy piled in a pyramid to a small ruling nobility of Incaic blood, with, at its apex, the Inca—absolute and divine.

For 400 years the Incas supervised the lives of their subjects so intensively that personalities were eventually suppressed. Peace was maintained in all the provinces, though it sometimes meant transferring a factious tribe the length of the empire. The land and all its produce belonged to the Inca, and surplus of plentiful harvests was stored for distribution in lean years. But while the government gave the people bread, it decreed how much

should be eaten. It arranged both a man's marriage and his periods of slave labour—for building the colossal fortress-palaces, the cobbled roads, or the acres of terraced fields, mining gold or silver, weaving, or simply as runners in the network of communications such as those that brought fish from the coast still fresh to the Inca's table in Cuzco.

The records of this intricate system, as there was no writing, were kept on *quipus*—bunches of knotted string that looked as though they might have doubled as whips—which only the nobility were taught to use. The sun and the dead were the chief objects of worship, though the creator-god Viracocha suffered a modification of his personality on the coastal desert, where the everlasting sunlight was less than a blessing. With an astonishing prescience (which almost rendered credible the legend of St Thomas' footprint on the sand near the temple at Pachacamac) their monotheism had a sort of trinity and predicted the coming of a white god.

The conquest of these people was brief, bloody, and enormously profitable. Already civil war had begun between Huascar and Atahualpa, sons of the Inca Huayna Capac, when in 1533 Pizarro marched down to Cuzco and at the same time lopped off the heads of the recently victorious Atahualpa and his civilization. The Indians were hardly prepared to understand European customs, individualism, or initiative, and what inevitably followed did not speak well for anyone concerned. A few later revolutions effected only the massacre of the ruling nobility and of vast numbers of upland Indians. As the only part of the Inca's system of ruling which the Spaniards retained was the custom of forced labour, it is curious that after 300 years of this exploitation the Indians should have been stubborn Royalists in the revolution against Spanish domination headed by *criollos* (American-born Spaniards). The teachings of the church, the only schooling available to most, may have

done much to foster this attitude, for many believe that the missionaries did the heavy work of expanding the Spanish Empire. The orders' records prove that they penetrated farther into the wilds and stayed there longer than any secular group. Thus white influence spread in time through the whole continent, according to the climate and the vision of possible gain (from the very first, the fabulous wealth of the mines of Potosi attracted the greatest number of Europeans), and the Indians' present customs have been determined as much by the date and length of white presence as by their original traditions.

The Indians we saw in southern Colombia were handsome and light-skinned and hardly to be differentiated from sun-tanned whites except by the amount of Europeanization of their costumes (which could not be called a scientific criterion). In Ecuador it was easier. We entered the country at Tulcán (about the farthest limit of Incaic domination

on the plateau) through a mammoth triumphal arch of baby-blue which framed a short enfilade of Indians in turkey-red ponchos on the road beyond. Their dark faces had high cheekbones, almond eyes, and prominent noses. Short and slight, they looked deceptively frail; and protectors of clear plastic over their raffish felt hats suggested an equally deceptive whimsy and modernity. But they did not even turn their heads to watch the bus drive past, and down the whole *altiplano* this semi-indifference obtained. They brushed against us in Quito's streets as though we were not there, and when our paths threatened a collision the effort of avoidance was left to us. Except for children and crones with an inclination to beg, an Indian never actually looks at a white person. The young laugh, fight and cry naturally until they are about eight. Then some neo-Spartanism overtakes them, so that at no later age do they show a flicker of emotion on their granite faces. They never laugh, never make one crinkle or gurgle of happiness, even when drunk, which is often.

In a life of drudgery relieved only by alcoholic orgies and coca, one regular occasion for over-indulgence is the market, held in every town of the *altiplano* on a certain day of the week—Quito on Tuesday, Riobamba on Saturday, Huancayo and Pisac on Sunday, and La Paz most of the week round. Coming on foot and by crowded buses, and sometimes sleeping the night on the street beside their piles of fruits and vegetables, the markets' crowds are so large it seems as though the whole population for many miles around must have gathered—apparently more for the festivity than the number of visible cash transactions. Although the crops often look as though they have been harvested too soon or too late, and the booths of clothing and manufacture appear suspiciously North American and unquestionably shoddy, we saw increasingly large sections of handsome native work as we went south. In Riobamba, one long block was devoted to pots of polished copper, in all sizes from ramekin to foot-bath, gleaming bright in the morning sunlight. Around a corner were wood and



A. J. Thornton

cardboard trunks decorated with bright reproductions of Matisse. Another block was occupied by a group of unusually dark and fierce Indians, sitting with their bare feet in the soft volcanic dust, offering tapes woven in geometric patterns which we saw used as belts and baggage straps, to tie up pigtailed and to swaddle babies.

In Peruvian markets we saw many bright tapes and blankets and ponchos, and at every station along the railroads we were offered the specialities of the region—magnificent fruits and flowers at Canta, knitted sweaters and caps and scarves at Juliaca, pottery dishes and bowls and animals at Pucará, and llama and alpaca-skin rugs and slippers all along the plateau. Odd heaps of dried leaves and seeds turned out to be the old Incaic pharmacopoeia, still used by the Indians (often we saw the dried leaves of *yerba hedi-onda* plastered against cheekbones or temples as a cure for headache). And at La Paz in a jumble of aniline dyes, old hardware, and curious silver figures, were small brown dried llama fetuses, used in multitudinous local rites of superstition. As we passed, the women selling them usually drew rags over their displays, not in shame but in further superstition. Here too were manufactured the brilliant masks and costumes for the Carnival *Diablada* and the Candlemas festivals—the plaster masks with eyeballs of painted electric-light bulbs and lashes of splintered mirror, the costumes embroidered with metallic threads and encrusted with lamp-prisms, beads and sequins. The brightly patterned homespun of the Cuzco area, and its simpler festival costumes embroidered with sun disks of red and gold, were being sold at the market in Pisac, which starts at dawn, finishing at churchtime on Sunday when the booths are put away for the weekly mass.

The church of SS Peter and Paul faces the main square of Pisac; its west walls were crumbling and part of the roof had collapsed. As the hour of mass approached, the *alcaldes* (mayors) of the neighbouring villages gathered in the court of the inn opposite, each with his round red hat, silver-tipped staff of office, and three young assistants. When the bell rang, they filed across to the church, led by the eldest blowing cockle-shells. The older assistants marched in pairs, followed by the *alcaldes*, who removed their hats and heavy black boots as they entered. The farm women also uncovered their heads as they kneeled on the earth floor, covering again only to feed their crying babies. Most of the service was read in the guttural Quechua that predominates on the altiplano, and reached

its climax in the presentation of the crucifix to the *alcaldes*. After each had kissed it, interest waned and the service quickly ended. The *alcaldes* marched back to the inn, while the liberated assistants made irreverent little bleats and blasts on their shells. Late that afternoon, when we returned from climbing the mountain behind the town, the venerable old men were dancing drunk, shuffling rhythmically by themselves in short lurching steps to tunes no-one else could hear.

The Epiphany dances at Ollantaytambo (another Incaic fortress-town about forty miles north in the Urubamba valley) were a matter of more organized festivity, the holy day that gives the Indian his other chance to get drunk and forget his usual drudgery. The procession that blessed the four corners of the plaza was dressed in Sunday best, the villagers who carried the holy statues aping the Viceregal costumes with makeshift bits of satin and feathers. After the church service, they danced aloof and formal steps with sober grace accompanied by stamping and hand-clapping. Partners came no closer than to hold the far end of scarf or kerchief, as they stepped through intricate cluster or chain formations. A couple in knitted masks, after taunting the main group, danced off down the road rhythmically whipping each other in a wistful reminder of pre-Columbian virility tests.

Most elaborate was the Candlemas celebration at Copacabana on Lake Titicaca. The huge pilgrimage cathedral, facing the Plaza Dos de Febrero, housed the miraculous statue of the Virgin of the Lake, carved in 1576 by Tito Yupanqui. (This name Yupanqui belonged also to the first Conqueror-Inca as well as to three-fourths of the Indians in the truck that took us from Peru across the border. And this site was one of the most sacred places of Incaic worship.) By mid-morning the plaza was filled with Indians in their most highly-coloured finery—women in bowler hats and aniline rainbows of bright homespun; many of the men costumed in wigs, masks, and feather headdresses, metal brocades and embroidered velvets (so expensive they were only hired for the occasion).

These men were dancers, groups wearing similar costumes having come from the same village, each with its own orchestra. While to a large extent their dance steps were the same—a slow shuffle and hop punctuated by spins and twirls, the dancers accompanying themselves on pan-pipes, small drums, or wooden ratchets—the dances and costumes represented different periods and attitudes. The *Kenachos* with broad epaulettes of jaguar-

skin and pleated white skirts showed vestiges of pre-Columbian totemism. A group in bull-masks, with short skirts from which dangled four limp stocking-legs, were not so much totemic as a colonial satire of the Spaniards' bullfighting. The most common figure was the *torero*, wearing his heavily-decorated jacket with considerable seriousness. This, while also colonial, has been found congenial by the Indians and has been taken over with negligible alteration. Devils, roosters, and Negritos pranced around separately, teasing the dancers and bringing them frequent drinks.

The dancers did not enter the cathedral, but followed the miraculous Virgin in the procession around the plaza. Children screamed as they scrambled for the printed prayers that dropped in a mist of confetti from spent fire-crackers, the odours of gunpowder and incense mixing strangely in the air. From the distance came the boom of festive dynamite. Church bells clanged, and the orchestras could scarcely be heard in the din until the procession reached the corner. All movement ceased, and from the still crowd rose treble voices chanting a hymn to the Virgin. A soft "Amen", the dancers shook their ratchets, and the crowd moved on its dazzling and deafening way.

The dancing kept on all day, and later Costa watched some of the fiesta from the balcony of the town hall. The dusky alcalde beside him pointed with scorn and said that of course Costa recognized the drunken tumult below as no more than Indian. "We Bolivians", he went on, "we Bolivians prefer to dance the foxtrot."

This sophistry might have passed in the dark, but in sunlight it was the clearest possible example of a prevailing antipathy. On the altiplano, dark resented light, light resented lighter and despised darker, so that only extremes of colour were able to get on without steady undercurrents of jealousy and uneasy scorn. The mestizo (in the south called *cholo*) is said to have inherited all the vices of the Spaniards and all the *cochonnerie* of the Indians. The Swiss manager of the tourist hotel in Puno spoke of going to buy food from an Indian village and being told there was nothing for sale until, after showing his money, he was brought all sorts of good things with the explanation that the villagers had feared that he, like the cholo and the military, would simply confiscate.

But for all his honesty and the Indians' appreciation, he has not been able to persuade them to catch for him the trout with

which the surrounding streams have been filled by the joint Peruvian-Bolivian hatchery at Chucuito. And this conservatism (to give it a nice name) extended to the farmers. A representative of the Peruvian agricultural undertaking called SCIPA exasperatedly told us that upland Indians refuse the technical assistance offered them, preferring to grow smaller and poorer crops by the means they have always known. As a result of this—and recent mass movements to the softer life of mendicancy in the cities, which left whole villages empty—Peru, with its tremendous agricultural potential, has lately had to import potatoes.

In their wretched economic lot, these Indians of the altiplano seem caught by a curiously perverse desire for the past. They made some adjustments in the early days of the conquest but seem to have been unable to adjust further. All along the plateau, their everyday clothes are the knee-breeches or bodices and full skirts of centuries ago. We saw women between Cuzco and Lake Titicaca wearing square flat hats with embroidered side-flaps in the mode of Spain in the 16th century. Workmen in Sucre wore felt versions of the Conquistadores' metal casques. None of these has any relation to Incaic costumes and though most of the dances as well as costumes are initiated from the Spaniards, they are invariably satirical. The few highly romanticized echoes of life under the Incas bring tears to the Indians' eyes. In Cuzco, members of the outlawed Aprista Party meet in obscure taverns blazoned with great sun-disks, symbolic of the Incas' fourfold division of the world, and prints of modern reconstructions of Incaic life and ceremony. "Peru was a great country under the Incas", we were told by a moustached young man who had escaped from Lima in his girl-friend's clothes. "If all of us put the country before ourselves, it can be great again." But his hope seemed tempered by a lack of conviction that greatness would increase their happiness; and even these few Apristas were waiting for some external agency to step in and guide them firmly as the Incas had once done.

Lowland Indians such as the Colorados and Jíbaros of Ecuador were untouched by the Incas and have only recently encountered the whites. Their spirit has fared less disastrously. Some years ago the Colorado Indians lived in Santo Domingo, about eighty miles west of Quito. A road was built to their village and traders came and cheated the ignorant Colorados. They moved ten miles to San



Horsemanship was one of the Spaniards' greatest assets in conquering a continent where there were no horses; and these riders on the Ecuador-Colombian frontier are evidently of the Spanish or other European descent usual in those who share their accomplishment. The wide white leather trousers known as zamoros are also of Spanish origin. This area is agricultural and few places in it have many horses; they are in any case used for transport to town rather than for cattle-herding



Not long ago the Jibaros of the Amazonian forest of Ecuador were head-hunters who shrank the heads of their victims to statuette size. That they have now mostly abandoned these practices is due to the influence of the Shell Company's oil-prospecting concession. Having just flown back from dental treatment, a Jibaro faces the camera; though his face is tattooed in accordance with tribal custom, he smokes a foreign cigarette and wears a city-made hat and a cast-off Shell shirt



The Indians of the High Andes do not thrive in the forest; and to work its concession the Shell Company sent to the coast for mestizos, the products of a mixture of Negro, Indian and European. Negroes were imported from Africa as slaves by the Spanish Conquistadores; they were cheaper than the Indians, who had to be paid, and were probably less impeded in their work by memories of independence. In general, the population comprises 50% Indian, 10% Negro, 5% European; the rest mixed



Market day in Riobamba, Ecuador, sees the Indians come into town, partly to trade but mainly for social intercourse. The group selling woven belts come from a region about fifteen miles distant from Riobamba. Of Aymara stock, they are darker in colour than the Indians surrounding them and have different customs; it is supposed that they were transplanted from their original home by the Incas, who used this remedy for unrest

Puli is the sorcerer of the tribe headed by Ramon, one of a dozen Colorado groups living in the jungle strip on the coast of Ecuador. The Colorados claim never to have been subjugated either by the Incas or the Spaniards. They have, however, been decimated by the diseases of the white man (common colds are almost fatal) so that only 400 of them remain; and they have moved far into the jungle to avoid contact with whites



The Quechua were an important tribe under the Incas; but in contact with Western ways they tend to become diseased and to degenerate. Some prefer to sit on the steps of the Cathedral at Cuzco and beg from American tourists rather than work on the land; it is often more profitable. Their mantles with bright colours are usually home-woven. Cuzco, once the capital of the Inca empire, is still an important city of Peru





Pisac, a Quechua village an hour away from Cuzco, has retained colonial customs and on Sunday it holds the local market and religious fiesta. The choirboys are aged from eight to twelve and they all wear their best clothes: home-made ponchos and knitted caps with traditional designs. Their leader's task is to blow a cockle-shell; and each of them carries a staff with a colonial silver coin on the top as an emblem of office



Copacabana, on the shore of Lake Titicaca, was in Incaic days a centre for worship of the sun and the moon. At the present time the feast of Candlemas, held at the shrine of a miraculous virgin (formerly high priestess of the sun) makes the city a sort of South American Lourdes. Every village participating has a different costume hired, at great expense, for one of half-a-dozen ballets which take place on the city square. These invariably make fun of whoever has tried to rule the Indians, whether the Incas, the Spaniards, or the Bolivian government. The two men dressed as jaguars, with jaguar-skin on heavy card on their shoulders, will perform a dance representing a hunt of jaguars while playing on their bamboo pipes

Miguel, the whites followed, and the Colorados were ravaged by white diseases. Finally, reduced to around 400 by an epidemic of smallpox, they moved to scattered settlements in the deep jungle, no family less than a quarter of a mile from another.

A government clinic in Santo Domingo accustomed the Colorados to inoculation, but no-one before gave them as much assistance as the Plymouth Brethren Mission, established in San Miguel in 1946. One building provided the much-needed store, school, and medical clinic, and in 1949 a second building was being erected to house the girls who lived too far away to come to school every day. The three chief problems of health, education, and faith were so interlocked that success in one depended on success in the others.

Costa and I spent the night on the floor of the Mission schoolroom and went the next morning with Doreen Clifford, a medical missionary from Lancashire, two hours by mule along jungle trails to the nearest Colorado settlement. By painting their bodies with red grease of *achiote* seeds (over which they add decorative black stripes) the Colorados kept themselves from getting the deep sores that other lowland Indians develop from even a simple scratch. The leaf they chew to make their teeth a fashionable black has the added function of preventing decay. But they are still easily felled by malaria and influenza (because of the calcium deficiency in their diet), as well as by liver and organic troubles.

Although Costa and I were greeted with some reserve by the chief, Miss Clifford was an old friend and most warmly welcomed, even by the shyest of little children. We went immediately to a neat thatched house, where Miss Clifford inoculated two children too weak from malaria to come to her clinic. Their mother, the only woman from another tribe, was for an Indian unusually concerned about her children, knowing that her blood rather than disease would be blamed for any fatality. Before leaving, we paid our respects to Puli, the handsome medicine man of the settlement, who apparently restricted his function to ceremonial magic, as he brought even his frequent hangers-on to the clinic.

On the other side of the Andes, in the jungle on concession to the Shell Oil Company, live many different tribes. The peaceful Alamas work for Shell, but as they have neither need nor desire for much money they will not work for more than two months at a

stretch. So Shell have to import additional men from the coast, a variety of mixtures of Indian, Negro, and white, who are no better workers than the Alamas but can be relied on not to walk home.

The Jíbaros along the lower Río Pastaza are the most famous tribe, heirs to traditions of poisoned darts and blow-guns, head-hunting and head-shrinking. Shell named a camp some seventy-five miles south-east of Shell-Mera after the nearby settlement of the Jíbaro chief Taisha. No oil was found after two years and Shell left its roads and village of company houses to the Jíbaros and the re-enveloping jungle, which has already covered the landing-strip with tall grass. As we climbed from the 'plane, the knot of Indians clustered at the far end of the airstrip broke and rushed toward us. The fierce Jíbaros welcomed us with a request for cigarettes. Fully clad in cast-off shirts and trousers, their faces marked with geometric patterns in bright inks, they were not at all what I had expected. A few wore slivers of bamboo through slits in chin or nose, and some had circles of wood as ear-plugs; but only one had tied the traditional bright yellow feathers to the end of his pig-tail. They laughed as they prodded the 'plane with their fingers and named over its parts to each other.

Many Jíbaros had worked for Shell, and when the oil company abandoned the camp, Taisha moved his tribe into its empty houses, using the desks for beds. We asked Taisha to show us a blow-gun. He didn't have one. A shrunken or a shrinking head? No, they had sold all those. Nothing remained to show that these had ever been a famous warrior people, feared by generations and still mentioned with considerable awe.

Within two years of immemorial savagery, without apparent fear or reservation, the Jíbaros are becoming part of the modern world. The Colorados, too, after their initial misfortune, were building a broad road along which to transport their crops to the world's markets. Thus the aloof and reactionary Indians of the altiplano are conclusive condemnation of the Incaic system, 400 years of Incaic welfare state having produced only the passively resentful slave, whom a further 400 years has not been able to liberate.

Taisha, a handsome man with bright eyes and long black hair, returned in the 'plane with us to Shell-Mera and civilization. He would not be able to fly back for two weeks, but that was little enough time to see the world. With him he brought a gaudy parrot and an extra handkerchief.

Animals and Man

I. The results of competition and conflict

by G. S. CANSDALE

The series of articles initiated in our July 1949 number by Mr Cansdale, Superintendent of the London Zoo, and edited by him, is concerned with various aspects of the geographical distribution of animals. In this and subsequent articles he will himself survey the effect of human action, describing in the first what happens when man competes and conflicts with his fellow-creatures

IN almost every inhabited country in the world man's influence on the flora and fauna can be seen more or less plainly. In completely settled countries, such as our own, man's interference is of such long standing that a state of equilibrium has almost been reached. In other areas, especially in tropical zones, the battle is still being actively waged and we can watch changes taking place, generally at a rate more rapid than anything Great Britain ever knew. The North American continent fills a place rather intermediate between Great Britain and the Tropics, and the effect of man's interference can well be considered by studying some wild-life problems in Great Britain, Africa and North America.

Great Britain has now reached a stage in which the only considerable areas untouched by man are those that have not seemed worth touching—the poorest of the moorlands, the rocky hills, the salt marshes—though even here such activities as sheep-grazing and deer-forest management may have materially affected the flora and fauna. As settlement began, the big carnivores were the first to be reduced in numbers; they were too dangerous to man and his stock. The European Brown Bear, never perhaps very common, managed to hold on in the mountains of Wales until the 10th century, while the much more mobile wolf was still abundant up to the Middle Ages. The matter-of-fact Baedeker, for instance, records how, in the 12th century, most of the monks of Llanthony Abbey in Monmouthshire, “having ‘no mind to sing to the wolves’, migrated to Gloucester”. In England it was exterminated during the reign of Henry VII; in Scotland it was still a serious menace in the middle of the 16th century and seems to have lingered until the 18th century, while in Ireland a few were even reported towards the end of that century. In *An Account of the Great Floods of August, 1829*, Sir Thomas Dick Lauder quotes a description by the young Macqueen, Laird of Pollochcock,

of how he killed the last wolf in Scotland, in the middle of the 18th century:

“As I came through the sloch [ravine], by east the hill there”, said he, as if talking of some everyday occurrence, “I forgathered wi’ the beast. My long dog there turned him. I buckled wi’ him, and dirkit him, and syne whuttled his craig [cut his throat] and brought awa’ his countenance, for fear he might come alive again; for they are very precarious creatures.”

Meanwhile the formerly abundant Red Deer had been drastically reduced in range by the increasing areas being taken over for farming, and in numbers by hunting for venison, skin and antlers, all very valuable to our forbears.

In mediaeval days the fens and other marshlands were dreary wastes, providing ideal hiding-places for such figures as Hereward the Wake, and breeding-grounds for innumerable marsh birds—the Bittern, Avocet, Black-tailed Godwit, Marsh and Montague's Harriers. The 18th and 19th centuries saw the conversion of these marshlands into some of the most fertile farming areas in the whole country, with such curtailment of potential breeding-grounds that, with the assistance of gamekeepers and collectors, all of these beautiful and interesting species had virtually been lost as breeding-birds by quite early in the present century. Fortunately the story does not end there; the past fifty years have seen a big change in our attitude towards our heritage of Nature, and the protection granted has allowed the Bittern, the Avocet and the Harriers to return as breeding-birds, while several other species appear to be taking an interest in possible breeding-places.

The story of the Osprey is similar to that of the marsh birds, but sadder, for it disappeared as a breeding-bird early in this century though it traverses Great Britain regularly as a passage migrant. The Osprey is a big fish-eating hawk which catches its prey



Ian M. Thom

The Avocet (above) and the Montague's Harrier (below) ceased to breed in Britain as a result of the 18th- and 19th-century conversion of the marshes of East Anglia into some of the most fertile farming areas in the country. They have now returned, largely due to man's active protection of their breeding-grounds

Harold R. Lo





J. Hosking

The Bittern, like the Avocet and the Montague's Harrier overleaf, has responded to man's protection of its nesting grounds and again breeds in Britain. Not so, alas,—



Eliot Por

—the Osprey, which was so persecuted it ceased to nest here; protection has not induced it to return as a breeding-bird though it regularly migrates through this country

The White-tailed Gnu, often called the Black Wildebeest, found survival almost impossible when man took over its feeding-grounds in South Africa and is almost extinct; it may, however, yet be saved



Zoological Society of London



On the other hand the Bongo, the most striking antelope of the African forest, has shown itself more adaptable, using man's clearing of the forest to advantage whilst keeping out of his sights

Paul Popper

The Ground Squirrel, unable to live in virgin forest, flourishes only where man has made clearings for farming. In West Africa it is very popular; one of its many nicknames is "the groundnut thief"



G. S. Carter

by plunging into the water; it is thus conspicuous and vulnerable and its loss was very largely due to persecution by gamekeepers. But it is a bird whose niche in Nature is a narrow one and even with rigorous protection it might well be unable to re-establish itself. A very different factor was the chief cause of the Kite's disappearance. In the course of time this bird of prey has become largely a scavenger and in one form or another, all quite similar to the British variety, it is a common sight in the neighbourhood of towns and villages of all parts of the Tropics. In the days when the usual method of garbage disposal was to dump it in the street, the Kite played a valuable part in sanitation and up to the 17th century it was very common in and around London. In *The Winter's Tale* Autolycus gave warning "when the Kite builds look to lesser linen", which suggests something of the town habits of the Kite in Shakespeare's day. The advent of the dust cart and hygienic methods of rubbish treatment by burning, burying and so on, squeezed out the Kite from the position it had found; gamekeepers, working on the theory that any large bird of prey naturally kills game, reduced the Kite's range to a few inaccessible parts of Wales where egg collectors then competed to take the last British Kite's egg.

The wide range of climate and country in Africa make it the most suitable choice for our consideration of the tropical zone. There are large areas where man has so far had no effect at all—areas still too inaccessible or dry to farm profitably, fresh-water swamps, deserts, open woodlands protected by the tsetse fly; in such places the occasional hunter has no more effect than any other natural predator. But throughout the great Dark Continent the frontiers are still moving and the areas of untouched country grow less. East and South and parts of Central Africa are the lands of the wide open plains and big game; this is a generalization, for geography, climate and vegetation vary immensely, but it is largely true. The terrible scourge of slave-raiding ended long ago and medical and public health services have steadily lowered the African death-rate, especially the infant mortality. As a result the native populations have increased rapidly and with them the demands for food-crops; at the same time their acquired needs for imported commodities have more or less forced them to grow cash-crops—maize, tobacco, pyrethrum. European settlement in South Africa and parts of East Africa has led to large-scale farming for a great variety of crops; and as farming extends the larger game animals must drop

back. There is no alternative, for large herds of big game and extensive farming cannot exist together. This is a case of direct competition in which the animals are bound to lose.

The Quagga has gone, in spite of occasional claims that a few still exist in out-of-the-way parts of South Africa. It was an animal of the open plains of Cape Colony and adjoining parts of Griqualand West and the Orange Free State, where at one time it was found in huge herds. The Dutch colonists, busy in extending their holdings, found themselves in direct competition with the Quagga and in the eighteen-thirties and forties they brought this fine animal—half zebra, half donkey in appearance—to the verge of extinction. The last survivor died soon after 1870. The Quagga had a rather narrow habitat in the plains of the Karoo, and was left with no sanctuary in its range. The White-tailed Gnu is down to very small numbers, mostly in the farm areas of South Africa; its status is still precarious, but the few remaining herds are receiving active protection and the species may yet be saved. In addition a very few small groups are living and just maintaining their numbers in one or two European Zoos.

Throughout tropical and sub-tropical Africa the total numbers of big game are decreasing regularly and this decrease is general and inevitable; it is the natural result of curtailment of range. In addition the game is being subjected to some persecution within this curtailed range, by native trappers and hunters and by European sportsmen. Even so there seems to be no immediate danger of any species being exterminated, owing largely to the reserves and National Parks which are sufficiently well distributed throughout tropical Africa to take care of most kinds of game. The day will come when the only large herds of big game will be found within these reserves and parks; it will not be just yet for, as is all too evident in the areas being developed in East Africa for groundnut and sunflower-seed production, some combinations of climate, soil and vegetation strenuously resist encroachment by man.

In the closed forest zone of Africa conditions are so dissimilar that the pattern of change is very different. This forest, stretching almost unbroken from Sierra Leone in the west through to Nigeria and Gabon, then across the Congo to Uganda, varies infinitely in composition but it is always complex, with many different kinds of tree, shrub and herb to the acre. It is called "closed forest" because its various layers either individually or jointly form a closed canopy and the floor

of the forest is never covered with the dense carpet of tall grass, burnt annually, that is so typical of the open plains. This forest zone generally has at least a 50-inch rainfall, often with two well-marked peaks, and a comparatively short dry season.

I am here referring primarily to the Gold Coast forest, where I spent fourteen years as a forest officer, but what has been said applies generally to all areas of closed forest in tropical Africa. This forest is very inhospitable by comparison with the African plains and Indian jungles; food-plants, whether trees or herbs, are almost non-existent, and before the introduction of staple food-crops from the West Indies permanent human occupation was impossible. To animals other than man these forests are also barren feeding-grounds. The dense undergrowth makes them unsuitable homes for the large, horned antelopes, and even the dwarf antelopes or Duikers, the typical small ruminants of the forest zone, are never very common—nor are the forest pigs. The complete absence of any carnivore corresponding to the tiger and the general scarcity of the leopard in this zone are additional facts suggesting the poverty of the African closed forest.

Occupation of this zone by man means the clearing of much of the forest growth. No satisfactory system of permanent farming has so far been worked out for the West African forest and after an area has been cropped for about three years it is abandoned and the forest is allowed to take control once again. This regrowth, or secondary forest, forms a habitat much more favourable for most kinds of animal life than virgin forest. Relics of farm-crops provide roots, herbage and perhaps fruits eagerly sought for by many animals. The oil-palm, whose fruit is a staple food for innumerable birds and animals, becomes established together with several other colonizing trees with very edible fruits; the popularity of their fruit is the reason for their quick occupation of abandoned farms. Such areas are normally cleared again for farming after ten years or so, by which time the soil has become enriched once more. The first clearing drives away some of the animal life, especially such species as the Colobus Monkeys which prefer the treetops in the untouched forest, but the secondary forest zone has a far denser animal population, including many small species that seem hardly able to make a living anywhere else. A good example of this class is the Ground Squirrel which has colonized the forest clearings but is not found in farm-blocks, however large, isolated in the forest without any suitable avenue of ap-

proach. Several large mammals also learn to take advantage of man's activities, notably the very handsome Bongo. Known in East Africa as an inhabitant of the mountain forest, it is regularly found in the neighbourhood of cultivations in the Gold Coast, feeding by night in farms and old farmlands and hiding up in impenetrable undergrowth from well before dawn until after dusk, even surviving when most other animals big and small have been killed and eaten by the farmers, every one of whom has a gun.

In the forest zone, as elsewhere, the human population is continually increasing and the day will finally come when the only remaining forest is in the forest reserves. As this time approaches there will be a further decrease in the fauna, but it is hoped that enough forest reserves, well distributed, will also be declared breeding-sanctuaries to ensure the survival of all medium-sized and larger animals. Until the land can be kept permanently under crops there will be plenty of cover for the smaller forms of wild life, though in a country where meat is a rare luxury even a squirrel is worth hunting for the pot.

Turning to the North American continent we find in the American Bison the most striking example of a large animal being brought to the verge of disappearance by human action and then saved by the same agency. First accounts of the Bison were brought back from Mexico by Spanish explorers. In early colonial days it was found from New York State down to Georgia and right across the western plains; and on their annual migrations the Bison of the plains reached as far north as Lake Winnipeg. Huge herds of another very closely-related race were found in the forest regions of Canada, even as far north as the Great Slave Lake. The herds of North America are said to have totalled, at one time, more than 60,000,000 beasts. It is hard to say just when numbers began to fall, but by about 1800 the Bison had been cleared from the eastern States. There were two main reasons for this war on the herds: they grazed on areas required for farming or stock-grazing, and they were a source of meat and hides. In the middle of the 19th century about 250,000 were still being killed every year in the Missouri region alone and even in 1878 a large drive resulted in 100,000 hides; but by the late eighties the Bison was approaching extermination and at the end of the century there were only two herds of wild Bison in the whole of North America, numbering barely 1000 animals. Active protection was started at the beginning of the 20th century and by 1942 the U.S.A. had over



From J. J. Audubon's "The Birds of America" by courtesy of the British Museum (Natural History)

North American Passenger Pigeons were so numerous that their migratory flocks hid the sun for several hours at a time. Freely slaughtered from the time of the arrival of the Europeans, 1,500,000 could still be killed in 1862 in one nesting-area alone, but the species was declining; soon after 1900 it had disappeared for ever.



Paul Popper

Three North American animals which, unlike the Passenger Pigeon, were saved by man from extinction are shown here. (Above) The Egret was slaughtered for its then fashionable plumes until the trade in them was prohibited. (Opposite, above) The Bison, at one time massacred, is now so well protected that its numbers have to be artificially controlled. (Opposite, below) Fifteen years ago the Trumpeter Swan had been all but exterminated, chiefly by Coyotes; thanks to man's active protection it now seems firmly established



Indian Department of Immigration

The Times



4000 head, scattered over 41 States, while a much larger stock had been built up in Canada. Today, with numbers up to 40,000, the American Bison is safe enough: indeed, surplus animals in the herds have to be slaughtered now and then.

The Passenger Pigeon is reckoned to have been more numerous than any other bird that North America has ever known. From the earliest days of French and British occupation these pigeons were being slaughtered, but in 1878 it was still possible for over 1,500,000 birds to be killed in one nesting-area only—in Ontario. They nested in Canada and the eastern States, wintering in the southern States, and their migration movements were often in flocks that obscured the sun for several hours at a time. Such numbers quite defeat the imagination today—except perhaps of those who know locusts at first hand. After 1880 the Passenger Pigeon began to decline rapidly and soon after 1900 it had disappeared for ever, exterminated by the combination of a number of factors. The clearing of the virgin forests, which made the birds nest in low trees, vulnerably exposed; the development of a net able to take 3000 birds at a time; the rapid growth of communications which allowed hunters to get quick news of flock movements and follow them up; a series of natural disasters, including sleet storms and forest fires in the nesting-grounds; these were some of the external factors, while the Passenger Pigeon had its own inherent weaknesses—unsuspiciousness and stupidity, a slow reproduction rate and an insistence on flying at low altitudes in vast flocks. For some animals, especially gregarious ones, there seems to be a critical level in numbers from below which there can be no recovery; this pigeon was ultra-social and it had perhaps already dropped below the safety level before man tried in vain to save it.

The beautiful Egrets came on the danger

list when it became the fashion for ladies to wear the graceful plumes from the breeding-plumage; this meant shooting the parents at their nests while the plumes were still unsoiled, that is, long before they had a chance to rear any young. Unrestricted slaughter went on until 1900 when protection was given by the Audubon Society; against such opposition that several of the watchers were killed. The birds were later made quite safe by the legal prohibition of any trade in their feathers, with the result that the Snowy and American Egrets rapidly recovered. It was neither competition nor conflict but just a matter of human greed which the public conscience was able to deal with in time.

Several other American animals are not far from the danger list but it is good to know that wild life now has many friends always on the lookout for species threatened with extinction. Action was taken fairly recently on behalf of the Trumpeter Swan, the largest of the North American waterfowl, with a weight of thirty to thirty-five pounds. Protection was given them in their breeding-grounds and while numbers were still very low they were helped through several difficult periods caused by the failure of the rains and the drying-up of their lakes. Such a bird is specially vulnerable, for its large size makes it an obvious and easy target as well as limiting the waters it can use with safety; while migratory habits may mean passing through regions where protection cannot be enforced.

The saying "as dead as the Dodo" refers not to an individual bird but to whole species which can never return. Many other names would be as apt as the Dodo's—Steller's Seacow, Passenger Pigeon, Great Auk, Quagga and others less well known. Man may indeed find himself in conflict and competition with wild life but he will generally be the loser in the long run if he exterminates whole species in the process.

MISE AU POINT

We have received an interesting communication from the Commercial Attaché to the French Embassy, M. André Sellier, regarding Professor E. G. R. Taylor's article in our February number entitled The World-wide Growth of Cities. M. Sellier, himself a distinguished geographer, while pointing out the difficulty of getting comparable statistics, tells us that Greater Paris has swollen to a Giant City of 5,000,000 inhabitants or more if the outer suburbs are included as for Greater London; and this in spite of a total increase of population in France as a whole of under 3,000,000 during the last thirty years. Paris is thus no exception to Professor Taylor's thesis of urban growth.